

SEQUENCE LISTING

<110> Hair, Gregory A.
Boden, Scott D.

<120> Novel Bone Mineralization Proteins, DNA, Vectors,
Expression Systems

<130> 06148.0115

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<150> 60/054,219

<151> 1997-07-30

<150> 60/080,407

<151> 1998-04-02

<160> 35

<170> PatentIn Ver. 2.0

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Trp Val Leu Ser Ile Asp Gly Glu Asn Ala Gly Ser Leu Thr His Ile
50 55 60

Glu Ala Gln Asn Lys Ile Arg Ala Cys Gly Glu Arg Leu Ser Leu Gly
65 70 75 80

Leu Ser Arg Ala Gln Pro Ala Gln Ser Lys Pro Gln Lys Ala Leu Thr
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Pro Pro Ala Asp Pro Pro Arg Tyr Thr Phe Ala Pro Ser Ala Ser Leu

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Asn Lys Thr Ala Arg Pro Phe Gly Ala Pro Pro Pro Thr Asp Ser Ala
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Leu Ser Gln Asn Gly Gln Leu Leu Arg Gln Leu Val Pro Asp Ala Ser
130 135 140

Lys Gln Arg Leu Met Glu Asn Thr Glu Asp Trp Arg Pro Arg Pro Gly
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Thr Gly Gln Ser Arg Ser Phe Arg Ile Leu Ala His Leu Thr Gly Thr
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Glu Phe Met Gln Asp Pro Asp Glu Glu Phe Met Lys Lys Ser Ser Gln
180 185 190

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Ala Val Asp Pro Ala Phe Ala Glu Arg Tyr Ala Pro Asp Lys Thr Ser
225 230 235 240

Thr Val Leu Thr Arg His Ser Gln Pro Ala Thr Pro Thr Pro Leu Gln
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Asn Arg Thr Ser Ile Val Gln Ala Ala Ala Gly Gly Gly Thr Gly Gly
260 265 270

Gly Ser Asn Asn Gly Lys Thr Pro Val Cys His Gln Cys His Lys Ile
275 280 285

Ile Arg Gly Arg Tyr Leu Val Ala Leu Gly His Ala Tyr His Pro Glu
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Glu Phe Val Cys Ser Gln Cys Gly Lys Val Leu Glu Glu Gly Gly Phe
305 310 315 320

Phe Glu Glu Lys Gly Ala Ile Phe Cys Pro Ser Cys Tyr Asp Val Arg
325 330 335

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 405 410 415

Leu Gly Phe Ser Trp His Asp Thr Cys Phe Val Cys Ala Ile Cys Gln
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<211> 717

<212> DNA

<213> Homo sapiens

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35 40 45

Trp Val Leu Ser Ile Asp Gly Glu Asn Ala Gly Ser Leu Thr His Ile
50 55 60

Glu Ala Gln Asn Lys Ile Arg Ala Cys Gly Glu Arg Leu Ser Leu Gly
65 70 75 80

Leu Ser Arg Ala Gln Pro Val Gln Ser Lys Pro Gln Lys Ala Ser Ala
85 90 95

Pro Ala Ala Asp Pro Pro Arg Tyr Thr Phe Ala Pro Ser Val Ser Leu
100 105 110

Asn Lys Thr Ala Arg Pro Phe Gly Ala Pro Pro Pro Ala Asp Ser Ala
115 120 125

Pro Gln Gln Asn Gly Gln Pro Leu Arg Pro Leu Val Pro Asp Ala Ser
130 135 140

Lys Gln Arg Leu Met Glu Asn Thr Glu Asp Trp Arg Pro Arg Pro Gly
145 150 155 160

Thr Gly Gln Ser Arg Ser Phe Arg Ile Leu Ala His Leu Thr Gly Thr
165 170 175

Glu Phe Met Gln Asp Pro Asp Glu Glu His Leu Lys Lys Ser Ser Gln
180 185 190

Val Pro Arg Thr Glu Ala Pro Ala Pro Ala Ser Ser Thr Pro Gln Glu
195 200 205

Pro Trp Pro Gly Pro Thr Ala Pro Ser Pro Thr Ser Arg Pro Pro Trp
210 215 220

Ala Val Asp Pro Ala Phe Ala Glu Arg Tyr Ala Pro Asp Lys Thr Ser
225 230 235 240

Thr Val Leu Thr Arg His Ser Gln Pro Ala Thr Pro Thr Pro Leu Gln

FOOT - 5298650

245

250

255

Ser Arg Thr Ser Ile Val Gln Ala Ala Ala Gly Gly Val Pro Gly Gly
 260 265 270

Gly Ser Asn Asn Gly Lys Thr Pro Val Cys His Gln Cys His Lys Val
 275 280 285

Ile Arg Gly Arg Tyr Leu Val Ala Leu Gly His Ala Tyr His Pro Glu
 290 295 300

Glu Phe Val Cys Ser Gln Cys Gly Lys Val Leu Glu Glu Gly Gly Phe
 305 310 315 320

Phe Glu Glu Lys Gly Ala Ile Phe Cys Pro Pro Cys Tyr Asp Val Arg
 325 330 335

Tyr Ala Pro Ser Cys Ala Lys Cys Lys Lys Lys Ile Thr Gly Glu Ile
 340 345 350

Met His Ala Leu Lys Met Thr Trp His Val His Cys Phe Thr Cys Ala
 355 360 365

Ala Cys Lys Thr Pro Ile Arg Asn Arg Ala Phe Tyr Met Glu Glu Gly
 370 375 380

Val Pro Tyr Cys Glu Arg Asp Tyr Glu Lys Met Phe Gly Thr Lys Cys
 385 390 395 400

His Gly Cys Asp Phe Lys Ile Asp Ala Gly Asp Arg Phe Leu Glu Ala
 405 410 415

Leu Gly Phe Ser Trp His Asp Thr Cys Phe Val Cys Ala Ile Cys Gln
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Ile Asn Leu Glu Gly Lys Thr Phe Tyr Ser Lys Lys Asp Arg Pro Leu
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FOOT-5298650

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 <212> DNA
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<213> Homo sapiens

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Glu Ala Gln Asn Lys Ile Arg Ala Cys Gly Glu Arg Leu Ser Leu Gly
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Pro Ala Ala Asp Pro Pro Arg Tyr Thr Phe Ala Pro Ser Val Ser Leu
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